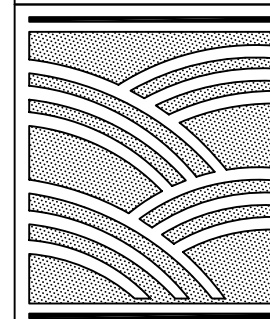
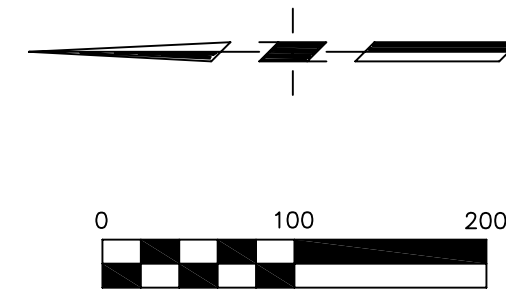
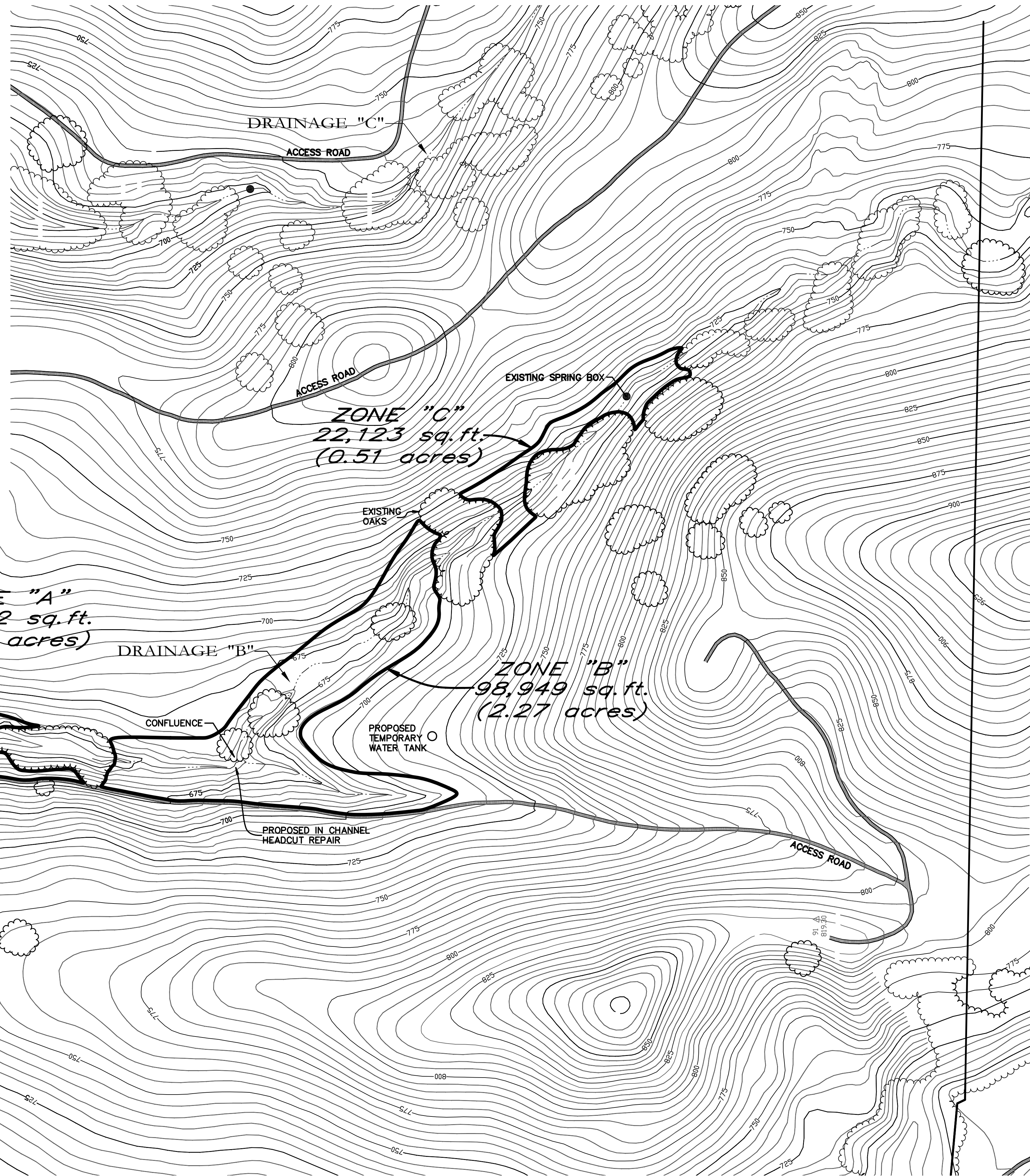
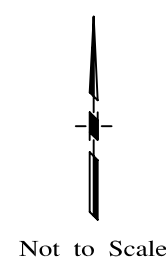
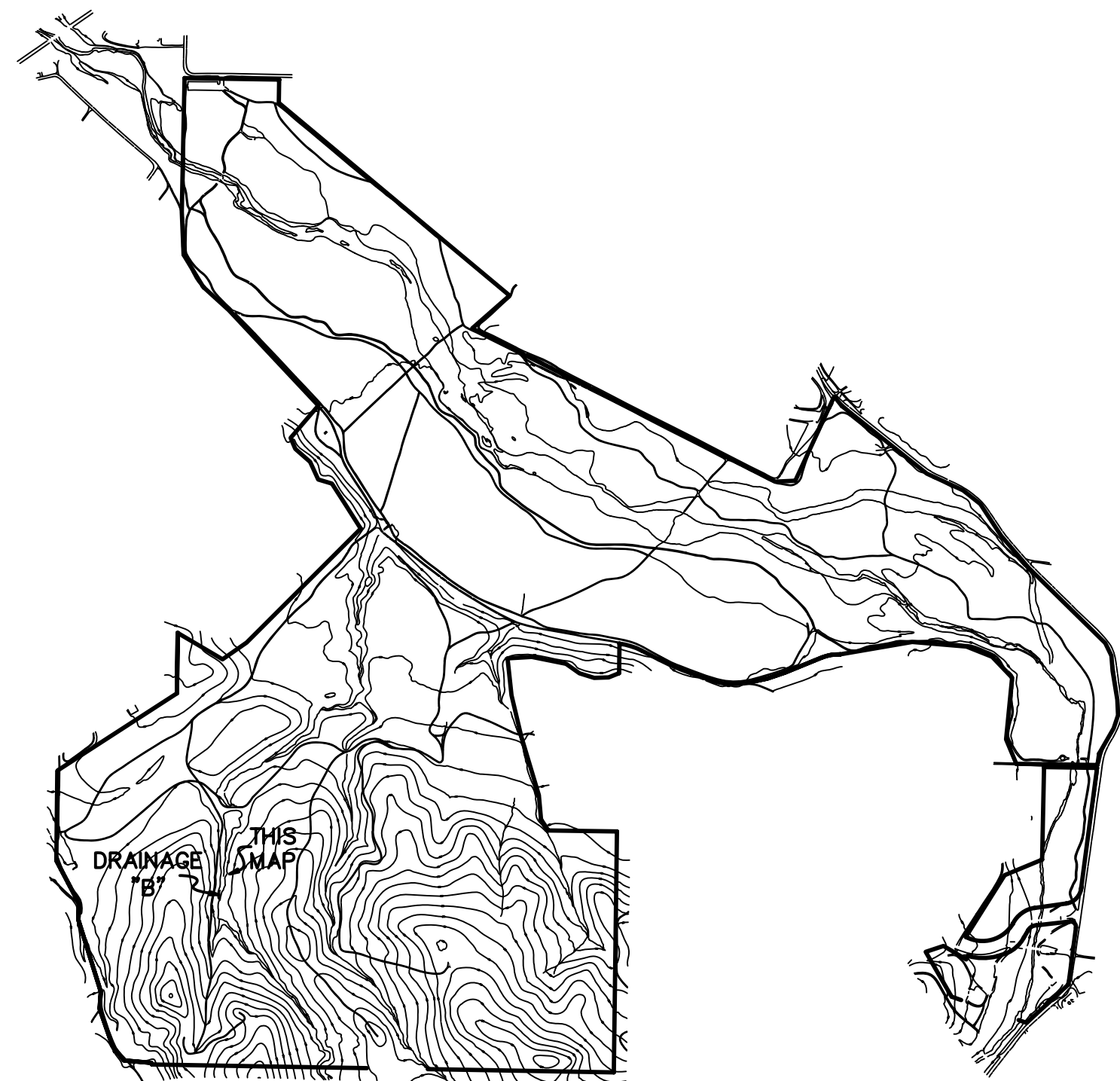


KEY MAP



CIRCUIT RIDER PRODUCTIONS, INC.

■ ECOLOGICAL RESTORATION SERVICES ■ HUMAN SERVICE PROGRAMS
9619 Old Redwood Highway
Windsor, CA 95492
voice 707.838.6641 fax 707.838.4503

DESIGN:	Rocky Thompson	REVISIONS		DATE	BY
DRAWN:	Joe Hughes				
SCALE:	1" = 100'				
DATE:	11/08/2006				
FILE:	Sycamore Grove				

PRODUCED FOR:

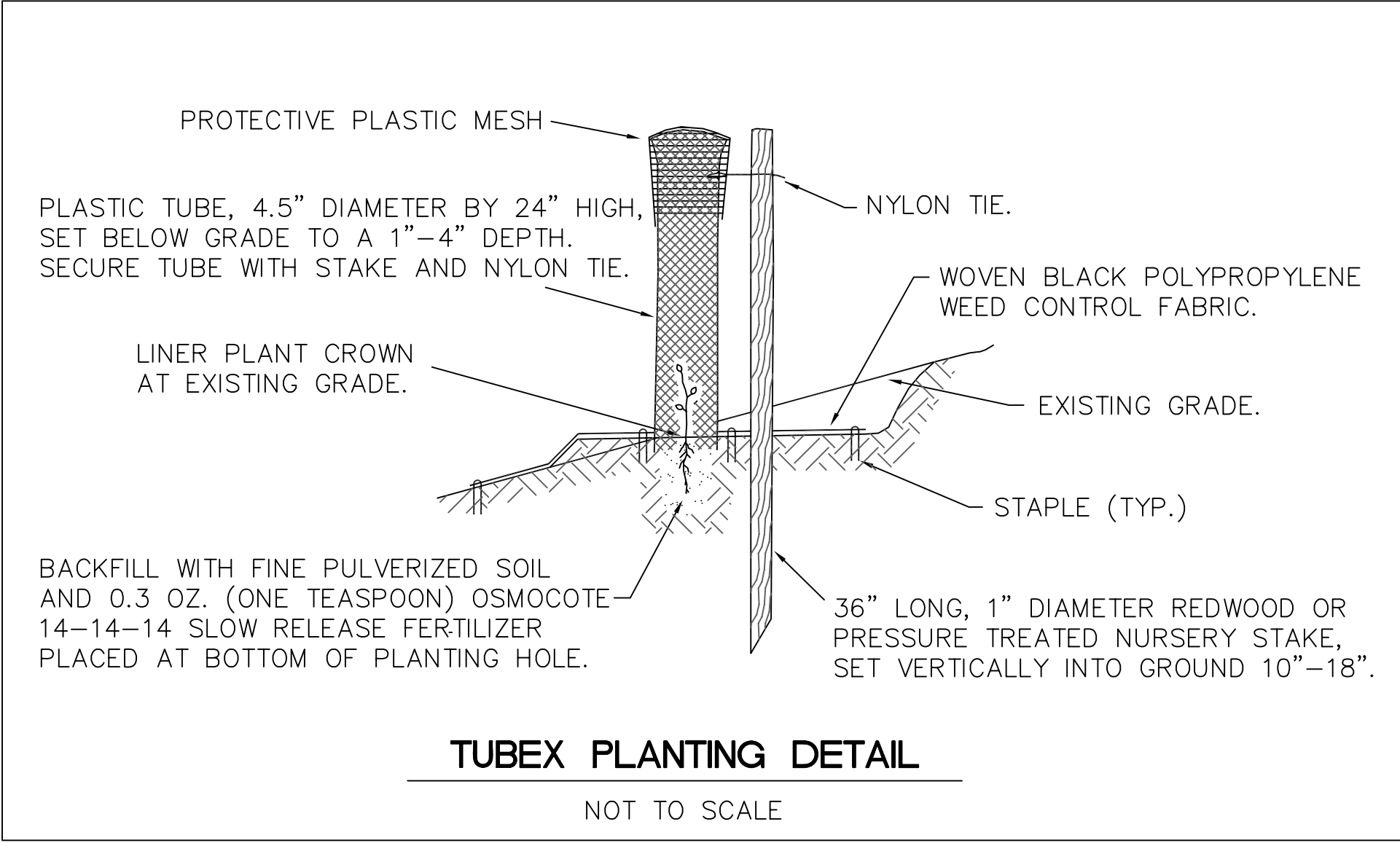
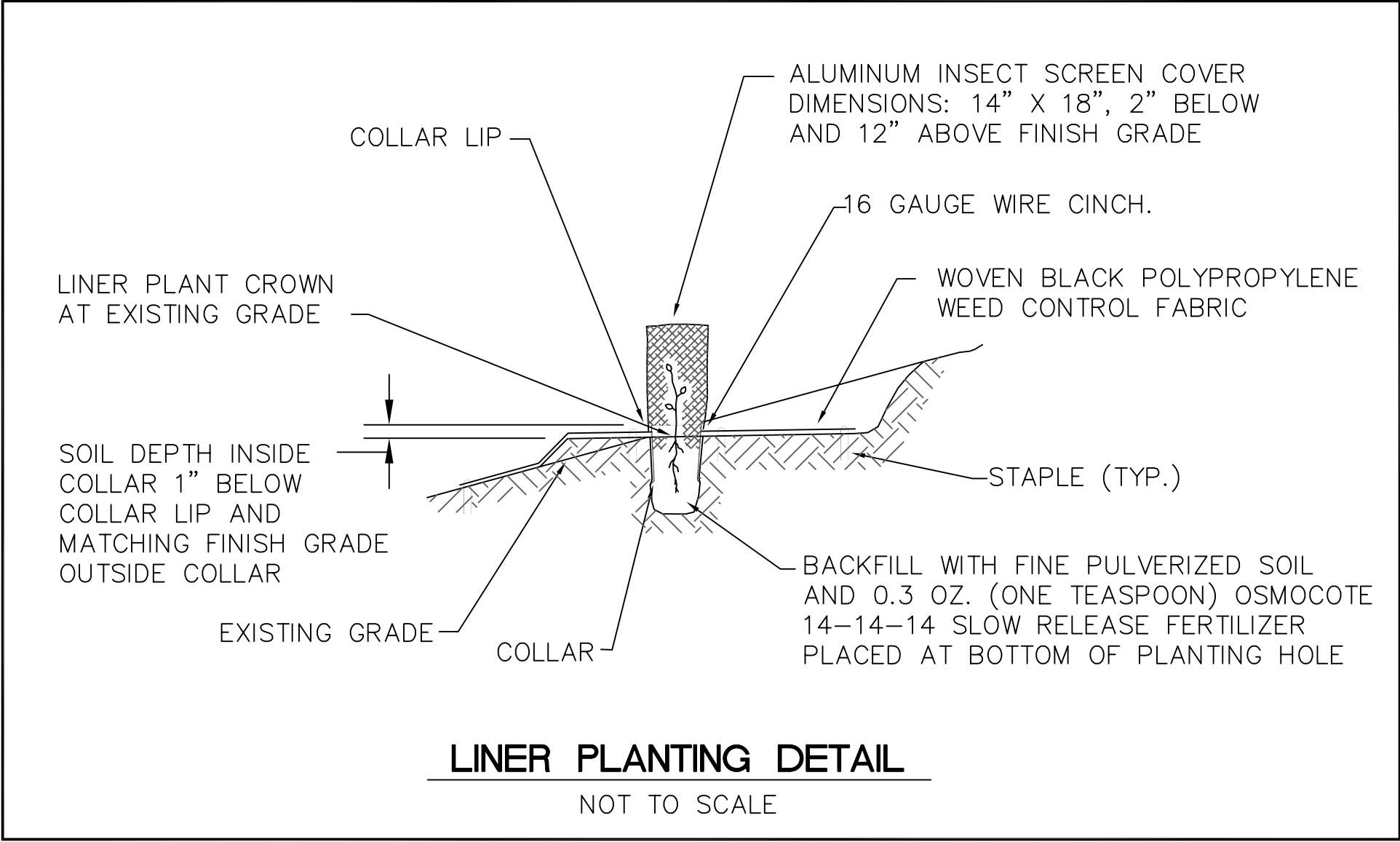
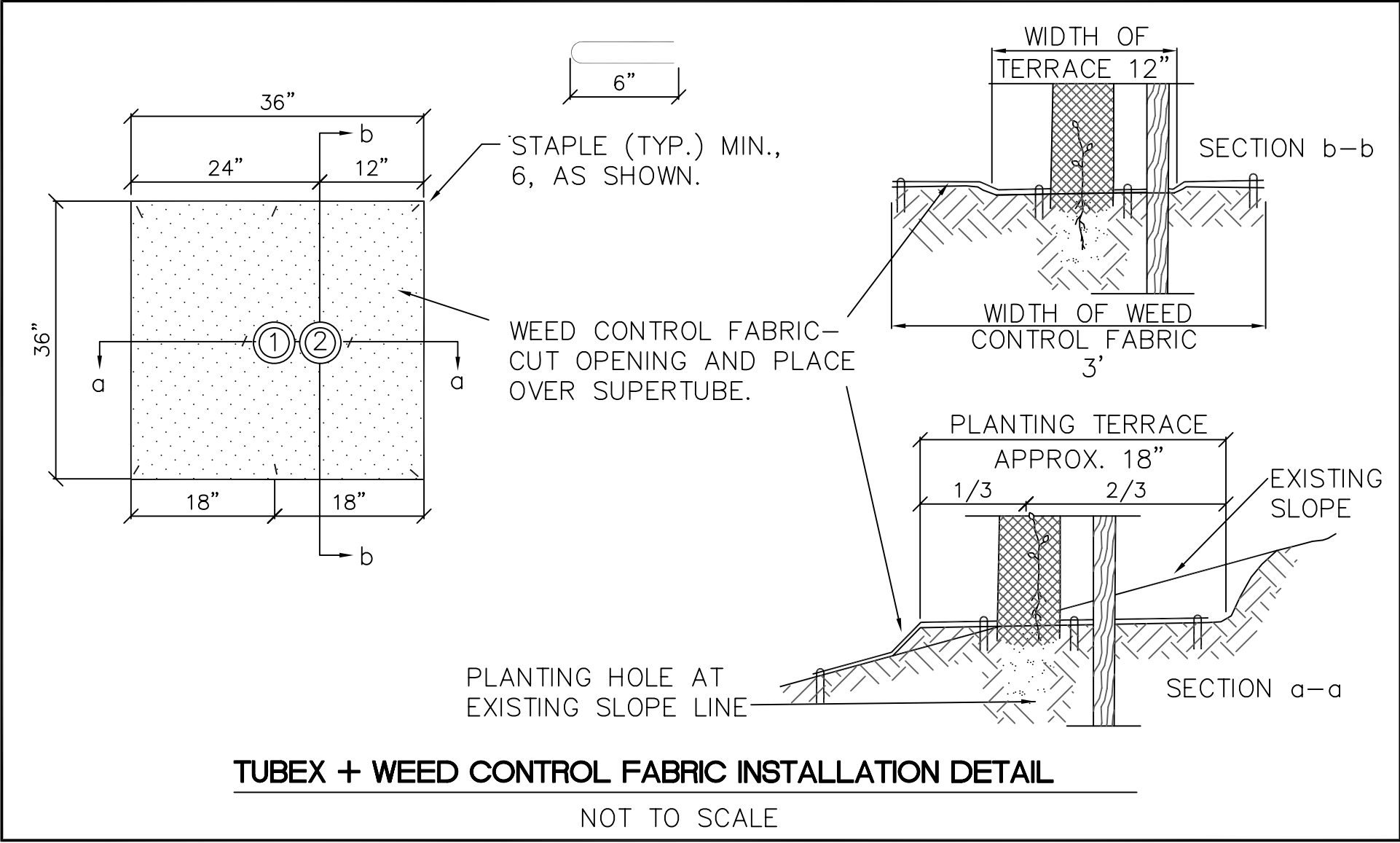
Livermore Area Recreation and Park District
71 Trevanno Road
Livermore, California 94551

**CONCEPTUAL RESTORATION PLAN FOR
SYCAMORE GROVE DRAINAGE "B"**

SHEET NO.

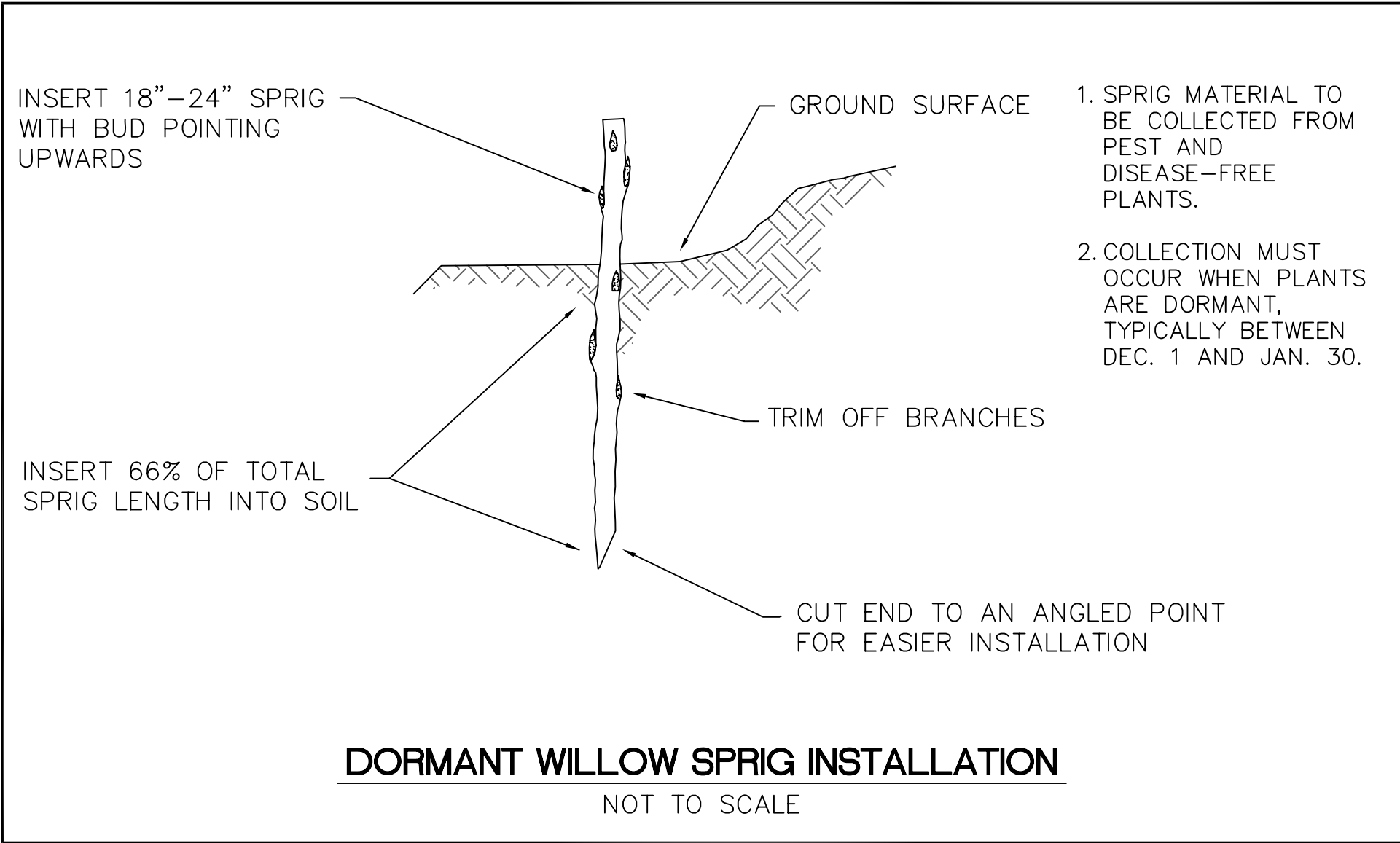
1

OF **2** SHEETS



NOTES

1. The creek restoration planting proposed in this conceptual plan will implement a small portion of a much larger restoration program called for in the Sycamore Grove and Veterans Regional Park Resource Management Plan (adopted on11/13/02). Planting areas are located on two arms of an unnamed tributary of Arroyo de Valle, referred to as Drainage B. An agricultural pond with a failing spillway, located in Drainage B immediately below the planting areas, will be repaired. See construction plans prepared by G. Parikh, P.E.. In addition, a small sediment forebay will be installed immediately upstream of the agricultural pond.
2. A total of approximately 668 plants will be installed in the planting Zones A, B and C in Drainage B. The restoration plantings shall be installed in the fall of 2007/2008 and 2008/2009 following the installation of an irrigation system and after irrigation (or rainfall) has moistened the soil to a depth of 10 inches or greater. Plant installation shall be completed prior to the onset of heavy winter rains when site access roads will become impassable.
3. Mature blue oak and valley oak trees are scattered within the proposed corridor planting in Drainage B. No tree species will be installed under the canopy of these existing trees. Low density shrub plantings may occur under the existing oak canopy in selected locations.
4. Small colonies of herbaceous wetland plants occur in widely scattered locations in both arms of drainage B. The proposed spacing of woody over story species shall avoid these small colonies to ensure that the wetland plants will not be shaded out in the future as the over story trees develop.
5. Planting technique shall be predominantly liner sized seedlings enclosed in protective hardware with weed control fabric. Plant protection hardware shall consist of "Tubex" or "collar and screen" (see Planting Details). Due to acorn crop availability in 2006 and 2007 oak species may be direct seeded instead of planted as container grown seedlings.
6. Each planting zone accurately depicts the boundary of the area that will receive plantings. No individual plant locations are shown. The final design layout will be developed in the field by staff qualified in ecological restoration. Each plant location shall be marked in the field with a color-coded (to species) surveyor-type flag. Flags shall remain at each planting spot after plant installation to facilitate future monitoring.
7. Where possible, all plant material produced for this project shall be propagated from on-site collected seed. Seed and/or cuttings will be collected from plants growing in Sycamore Grove Park or immediate vicinity. Plant materials will be collected in the summer and fall of 2007. Propagation activities will begin after summer seed collection and continue until fall/winter 2008/9 when plants will be ready for out planting.
8. Plants in all areas will be irrigated with an above ground temporary drip system. The system shall be designed to last for a minimum of two years. If normal rainfall patterns and amounts occur during the 2007/8 rainy season, then the system may only be used the first dry season following plant installation. If below normal rainfall occurs, then the system will be operated in the second dry season following installation. The proposed location of a temporary water tank is shown on Sheet 1 near Zone B will provide water through a gravity flow system. Additionally, an existing spring box located in Drainage B will be evaluated as a potential irrigation water source. Plants will require frequent irrigation during the first dry season. Irrigation events should begin in late March or early April, assuming no prolonged winter drought conditions occur. Irrigation events will continue into October. Approximately one half to one gallon of water shall be applied directly into the planting collar (see Planting Details) during each irrigation. Watering interval shall be approximately 7 days depending on weather conditions. Irrigation system shall be tested and fully operational by April 15.
9. Weed removal shall be performed once in February, April and December each year of the three year maintenance period. Volunteer groups with successful track records in the Park will be partners in the plant maintenance activities.
10. Protective screens shall be opened during the later portion of the first growing season to allow the plant to grow beyond the confines of the screen enclosure. Open screens shall appear as an open cylinder to provide continued browse protection to the lower portion of the plant. Screens, collars, and weed control fabric shall remain in place for 3 to 5 years following plant installation. Tubex installed on shrub species can be removed at the end of the second growing season following installation.
11. The planting shall have a complete survival count each year during the three-year maintenance and monitoring period. The first count shall occur at the end of the first growing season (Sept. – Nov. 2008). The final count shall occur at the end of the maintenance period in the fall of 2010. Three brief annual monitoring reports shall be produced. Each monitoring report shall include photos of all planting areas from field-marked photo documentation stations, survival data, and recommendations. All three monitoring reports shall be sent to the Costal Conservancy, City of Livermore, and Livermore Area Recreation and Park District



PLANT LIST									
Scientific Name	Common Name	Flag Color							
			Zone A	Zone B	Zone C				
SHRUBS									
<i>Baccharis pilularis</i> cons.	Coyote Bush		X	X	X				supercell
<i>Heteromeles arbutifolia</i>	Toyon		X	X	X				tree band
<i>Rhamnus ilicifolia</i>	Holly-leaf Redberry		X	X	X				tree band
<i>Rubus ursinus</i>	California Blackberry		X	X	X				tree band
<i>Sambucus mexicana</i>	Blue Elderberry		X	X	X				deepot
<i>Symphoricarpus albus</i>	Snowberry		X	X	X				tree band
TREES									
<i>Quercus douglasii</i>	Blue Oak		X	X	X				direct seed / deepot 16
<i>Quercus lobata</i>	Valley Oak		X	X	X				direct seed / deepot 16
<i>Salix laevigata</i>	Red Willow		X	0	0				sprig/deepot
<i>Salix lasiolepis</i>	Arroyo willow		X	0	0				sprig/deepot
TOTAL:			130	440	98				